

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 04-251285

(43)Date of publication of application : 07.09.1992

(51)Int.Cl.

G09F 9/35  
G02F 1/133  
G02F 1/1343  
G02F 1/136  
G03B 33/12  
G09F 9/30  
G09G 3/36  
H04N 5/74

(21)Application number : 03-001133

(71)Applicant : MATSUSHITA ELECTRIC IND CO LTD

(22)Date of filing : 09.01.1991

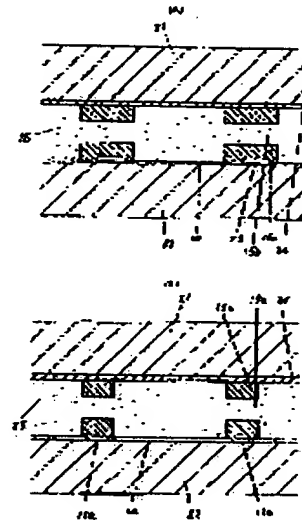
(72)Inventor : TAKAHARA HIROSHI  
OMAE HIDEKI

## (54) LIQUID CRYSTAL DISPLAY DEVICE AND LIQUID CRYSTAL PROJECTION TYPE TELEVISION USING THE SAME

### (57)Abstract:

**PURPOSE:** To provide a liquid crystal display device which makes a high-brightness display without any optical void at the peripheral part of a picture element.

**CONSTITUTION:** A 1st insulating layer 15a is formed of an organic material on a TFT 23 and signal lines 11a and 11b on an array substrate 22 where switching elements are formed, a 2nd insulating layer 15b is formed on an opposite substrate 21 where a counter electrode 24 is formed above the 1st insulating layer 15a formed on the array substrate 22, and high polymer dispersed liquid crystal 25 is removed from between the signal lines 11a and 11b and a picture element 14 and its vicinity. Consequently, the optical leakage at the peripheral part of the pixel electrode, the deterioration of the liquid crystal, and the burning of an image due to a lateral electric field between the signal lines and pixel electrode can be prevented. Further, the high-brightness display can be made since no polarizing plate is used.



## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]